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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/805,303

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EXAMINER

STOREY, WILLIAM C

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/805,303	Applicant(s) HIRABAYASHI, KAZUNORI	
	Examiner WILLIAM C. STOREY	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/19/2008 has been entered.

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 & 11 (and dependents) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims claim "determining whether a line object which is to be drawn by the display list is drawn by a line drawing command." If the line object is *to be drawn*, then how could it already have been drawn by a line drawing command?

3. Claim 10 (and dependents) is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

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matter which applicant regards as the invention. "The determining unit" is referred to; however, multiple determining units have been claimed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 9, & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka et al. (US Patent 7200268), hereinafter referred to as Ishizuka; in view of well known prior art (MPEP 2144.03) and/or Schiller et al. (US 6049339), hereinafter referred to as Schiller.

Regarding claim 1, Ishizuka discloses an image processing device. Ishizuka discloses using PostScript to communicate from a client terminal to a printer through an image processing device, which reads on claimed image forming apparatus that forms an image on the basis of PDL information; as disclosed at column 4, lines 8-21. Ishizuka discloses a fine line image extracting section, which reads on claimed determining means; that extracts a thin line when there is a possibility of blurring or disappearance, which reads on claimed determination unit configured to determine whether a line object which is to be drawn by the display list (see below) is drawn by a line drawing command; as disclosed at column 4, lines 52-58 and col. 5, lines 11-14. Ishizuka discloses the image processing device generating raster data from the image data on the basis of a drawing command, which reads on claimed line drawing

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command; as disclosed at column 4, lines 9-11. Ishizuka discloses the thin line warning function processing the extracted line when it is at or below a predetermined thickness, which reads on claimed comparison unit configured to compare, if the determination means determines that the PDL information is a line object that is drawn by a line drawing command, at least one of the attributes of the line object that are a width (disclosed), an angle, a line type, hue, saturation, brightness, and an angle of a screen pattern with a threshold; as disclosed at column 4, lines 46-51 and column 5, lines 12-14, 21-23, and 27-29. Ishizuka discloses that if the extraction passes the previous test, the thin line may be converted into a thick line, which reads on claimed changing unit configured to execute change of at least one of the attributes of the line object in accordance with a comparison result of the comparison unit, the change of at least one of the attributes of the line object being one of the change of color of the line object, change of line width of the line object or change of both the color and line width of the line object; and drawing unit configured to draw the line object with at least one of the attributes changed by the changing unit; as disclosed at column 5, lines 24-27 and 39-40. It is inherent that there be means for performing the operations.

However, the previous disclosures did not distinctly disclose a forming unit configured to form a display list based on an analysis of PDL information. However, the examiner takes official notice of the fact that it was well known in the art to provide a forming unit configured to form a display list based on an analysis of PDL information. Further, Schiller presents that it is well known to convert high-level PDL language (such as PostScript, for example) into a lower-level display list (col. 1, lines 8-36). A PDL

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interpreter that converts the PDL file into a display list may read on claimed forming unit. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a forming unit configured to form a display list based on an analysis of PDL information in order to allow for increased speed and/or more efficient memory usage by having the PDL language converted to the lower-level display list commands. The display list acts as intermediate data between PDL language and bitmap representation before output. As such, PDL information that contains information to draw a line object would read on "which is to be drawn by the display list."

Regarding claim 4, Ishizuka discloses everything as applied above for claim 1. Ishizuka discloses that once the line is found to be at a predetermined thickness or less, the thin line warning function outputs a warning message saying that there is a possibility of blurring, which reads on claimed wherein the comparison unit is configured to execute a comparison with a threshold that can determine whether the line object is likely to blur when the line object is drawn; as disclosed at column 5, lines 31-35, fig. 8, and col. 5, lines 5-46.

Regarding claim 9, Ishizuka discloses everything as applied above for claim 1. As disclosed above, Ishizuka discloses the thin line warning function to determine whether the extracted line is at or less than a threshold and is the kind of line that needs processing responsive that check or whether the extracted line is above the threshold and is the kind of line that does not need processing responsive to that check, which reads on claimed detection unit configured to detect a kind of the line object, as disclosed above and at figure 2 and column 5, lines 21-29. Ishizuka discloses claimed

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changing unit configured to the color of the line object, or the line width of the line object, or the color and line width of the line object, on the basis of a detection result of the detection unit, as disclosed column 9, line 67 and column 10, lines 1-4.

Regarding claim 11, claim 11 is rejected upon the same reasoning as applied for claim 1. Changing from an apparatus to a program does not make the claim patentably distinct.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 3, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the previous disclosures as applied above for claim 1 in view of Torpey et al. (US Patent 6753976), hereinafter referred to as Torpey.

Regarding claim 2, Ishizuka discloses everything as applied above. Although Ishizuka did not distinctly disclose determining whether a particular object is a polygon or not, Ishizuka discloses that the fine line image extracting section (which previously has been disclosed as been able to detect a line object from PDL information) may extract line images that are straight lines, circular arcs, or curves of any various shapes.

In a similar field of endeavor, Torpey discloses adaptive pixel management using object type identification. In addition, Torpey discloses classifying objects according to different types. Torpey discloses classifying objects as graphics objects including line

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art, graphics primitives, and/or geometric data. Torpey also indicates that other object types may also be defined; as disclosed at column 17, lines 15-17, 26-27, 42-45, and 56-57 and column 3, line 54. As Torpey has specifically shown that image objects may be classified into line art, graphics objects, etc. (which would most usually render shapes (polygons)) and additionally that other object types may be defined, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishizuka by specifically providing determining whether a particular object is a polygon or not, as taught by Torpey, for the purpose of adding flexibility and/or rendering classified objects differently in order to result in a more desirable output image.

Regarding claim 3, Ishizuka discloses everything as applied above for claim 1. Although Ishizuka did not distinctly disclose determining whether a particular object is a polygon or not, Ishizuka discloses that the fine line image extracting section (which previously has been disclosed as been able to detect a line object from PDL information) may extract line images that are straight lines, circular arcs, or curves of any various shapes.

In a similar field of endeavor, Torpey discloses adaptive pixel management using object type identification. In addition, Torpey discloses classifying objects according to different types. Torpey discloses classifying objects as graphics objects including line art, graphics primitives, and/or geometric data. Torpey also indicates that other object types may also be defined; as disclosed at column 17, lines 15-17, 26-27, 42-45, and 56-57 and column 3, line 54. As Torpey has specifically shown that image objects may

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be classified into line art, graphics objects, etc. (which would most usually render shapes (polygons)) and additionally that other object types may be defined, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishizuka by specifically providing determining whether a particular object is a polygon or not, as taught by Torpey, for the purpose of adding flexibility and rendering classified objects differently in order to result in a more desirable output image.

Ishizuka discloses that the fine line image extracting section may extract line images that are straight lines, circular arcs, or curves of any various shapes (as disclosed at column 4, lines 60-62), which shows that the system may extract lines composing a polygon and work with the line width value as previously disclosed by Ishizuka. This, in conjunction with the previously disclosed material, reads on claimed wherein the comparison means compares, if the determination means determines that the PDL information is composed of a polygon, a value of line width of the line object, which is composed of the polygon, with a threshold of the line width.

Regarding claim 12, claim 12 is rejected upon the same reasoning as applied above for claims 1 & 3. Changing the statutory class does not make the claim patentably distinct.

Regarding claim 13, Ishizuka and Torpey disclose everything as applied above for claim 2. In addition, the claim is rejected based upon similar reasoning applied for claim 3.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka in view of well known prior art (MPEP 2144.03).

Regarding claim 10, Ishizuka discloses everything claimed, as applied above (see claim 1). Although Ishizuka did not specifically say means for determining whether the line object is a color one or a monochromatic one, Ishizuka disclosed means (inherent to be able to perform the process) for counting the amount of color and determining whether element data is black and able to compare values against a threshold to lead to determinations (col. 7, lines 24-40, col. 8, lines 52-57). Providing further support, the examiner takes official notice of the fact that it was well known in the art to provide a determining unit configured to determine whether a line object is a color one or a monochromatic one.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishizuka by specifically providing a determining unit configured to determine whether a line object is a color one or a monochromatic one, for the purpose of stopping the system from going to colors that are not needed in a monochromatic print, greater efficiency, and/or awareness.

Ishizuka discloses that once the line is found to be at a predetermined thickness or less, the thin line warning function outputs a warning message saying that there is a possibility of blurring, which reads on claimed a determining unit configured to determine whether the line object is likely to blur, on the basis of a determination result of the determining unit; as disclosed at column 5, lines 31-35, fig. 8, and col. 5, lines 5-46.

Ishizuka discloses claimed changing unit configured to change the color of the line object, or the line width of the line object, or the color and line width of the line

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object, if the determining unit determines that the line object is likely to blur, as disclosed column 9, line 67 and column 10, lines 1-4, 28-33 and figure 8. The user may select which of the above-mentioned conversion processes to use after thin line determination check with threshold.

Response to Arguments

7. The applicant requested clarification of some issues in his or her remarks. In response, when an objection was made to claims 1-13, considering that claims 5-8 had been cancelled, the objection would apply to the non-cancelled claims (for example, 1-4 and 9-13). When a rejection was detailed under 103 rather than 102 for claims 3 and 12, the rejection in that particular instance may be interpreted as a rejection under 103 for claims 3 & 12.

8. Applicant's arguments filed 9/19/08 have been fully considered but they are not persuasive.

9. Regarding the discussion for claim 1 (and similarly-limited and dependent claims), the substance of the applicant's proposal regarding the claim(s) surrounds the idea that Ishizuka does not provide for an embodiment of the claimed invention. The applicant then proceeds to attempt to support this allegation by providing various reasons external to the claims as to why he or she believes this is so. However, unclaimed benefits that the applicant purports his or her invention has over the art, a particular scenario dealing with hair where his or her invention would not detect blurring but the prior art would, attempts to differentiate based upon purpose (such as a

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allegated purpose to produce a printing plate instead of a “final printed matter”), and other personal reasoning is external to the claim language. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Further, the applicant presents other irrelevant arguments that supposedly support his or her claim that the claimed invention would be different than the presented prior art. This includes remarking that his or her invention could not be read upon by the cited reference because “since line colors are changed ... it is different from a printed matter as a final product.” Not only does this not make logical sense, nowhere in claim 1 is any language presented that would pertain to such a remark. The closest relation that may be found in the claim pertains to changing the color of a line – exactly what the applicant claims the cited prior art is doing. Further proving the immateriality of the applicant's irrelevant remarks of this nature, it is only claimed that *at least one of* attributes (one of which may be color) is dealt with. Other irrelevant arguments include attempting to contrast the prior art with the current invention by claiming that the current invention ensures printing, that the current invention changes color to a hue which is similar rather than chosen by a user, and discussing another particular example concerning a broken line as a parameter. Although these discussions are appreciated, they hold no delineated basis in the claim language; and therefore, fail to command enough weight to overcome the rejection.

Regarding the discussion for claim 1 (and similarly-limited and dependent claims), the applicant additionally proposes that the instant invention differs from the

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prior art because, the applicant purports, with Ishizuka's method, the effect of thickening the thin line to a matching pattern is unconditionally produced. Yet, the applicant later comments that "the present invention *automatically*" (aka unconditionally) "thickens the line." As such, applicant presents his allegation of the references teachings as teaching toward the reference rather than away. Nonetheless, it was specifically disclosed in the prior office action how Ishizuka disclosed "processing the extracted line when it is at or below a predetermined thickness." This shows conditionality, rather than conditionality. At least fig. 8 and col. 5, lines 5-46 of Ishizuka further assert this fact.

Regarding the discussion for claim 1 (and similarly-limited and dependent claims), the substance of the applicant's next proposal regarding the claim(s) surrounds the idea that the cited prior art differs from the instant invention because the instant invention is concerned with "the object level" and the cited prior art is concerned with "the pixel level." The rejection has provided for the limitations of the claim. Even if Ishizuka dealt with "a pixel level" (though it is unclear exactly what the applicant is referring to considering the applicant provided a circular explanation of this phrase. After mentioning "the pixel level," the applicant further commented, "In other words ... a thin line 'at the pixel level.'"), the claim would still be read upon. The examiner assumes that the applicant is alleging something like that Ishizuka would deal with a pixelated image of a line. Even en arguendo, "a line object" drawn by a line drawing command may be read upon by a pixelated image a line. An image of a line may be called "a line object." There is no specification in the claim precluding such an interpretation. Nonetheless, Ishizuka specifically discloses the thin line extraction able to be carried out

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from the descriptions of the drawing commands, such as from the mentioned PostScript PDL language (col. 5, lines 12-14, for example.) From the applicant's remarks, it is interpreted that "at the object level" is supposed to be dealing with the drawing commands of the PDL language. Considering the previous disclosure of Ishizuka, even with the "object level" allegation of the applicant, the claim limitations would still be provided for. Additionally, the applicant proposes arguments like since the applicant's invention changes parameter's at an analysis stage, it would be unnecessary to perform judgment or processing again as purportedly taught by Ishizuka. There are many issues with this argument. First, considering the previous discussions, it has been disclosed how Ishizuka provides for judgment from analysis of the drawing commands. Second, the claims make no necessitation that parameters be changed at an analysis stage. Thirdly, the argument supposed the applicant's own invention being modified by Ishizuka. There is no reason to combine the applicant's invention with Ishizuka as the applicant sees it. Therefore, whether it would be unnecessary to perform judgments or processes again after the applicant's invention supposedly provided already performing doing them is irrelevant.

Regarding the discussion for claim 12 (and similarly-limited and dependent claims), the substance of the applicant's first proposal regarding the claim(s) surrounds the idea that Torpey deals with the pixel level. Though the applicant does not point out what exactly from the Torpey reference (the examiner saw the citation of the abstract) makes the applicant believe that Torpey is "at the pixel level" and why being "at the pixel level" would preclude Torpey from reading on the claim language, the examiner

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assumes that the applicant is trying to bring some over some of the pixel level/object level argumentation used previously. As such, reference to the previous discussion regarding the applicant's remarks pertaining to claim 1 may be useful. Nonetheless, the cited reference as used in rejecting with Torpey deals with objects. Accordingly, this would show Torpey working "at the object level." Further, the applicant him or herself specifically refers to "the object type of identification of Torpey" (pg. 13, 3rd ¶ under "Lack of Sufficiently..."), furthering reducing any weight the applicant's argument may have had.

Regarding the discussion for claim 12 (and similarly-limited and dependent claims), the substance of the applicant's second proposal regarding the claim(s) surrounds the idea that Torpey fails to provide forming a display list and that it was not cited for that purpose. However, forming the display has been provided for, and Torpey does not need to provide for that limitation.

Regarding the discussion for claim 12 (and similarly-limited and dependent claims), the substance of the applicant's other proposals regarding the claim(s) surrounds the idea that the 103 rejection is improper. However, these remarks appear to preformed remarks used generically and repetitiously without any particular bearing to the case at hand. Further, no supporting rationale has been provided to prove the merit of these preformed remarks. As the applicant has only provided an assertion that one of ordinary skill would not have been able to utilize features of Torpey and Ishizuka, not all the recitations have been provided, or that that there is a lack of motivation, the examiner can only responded by providing equal assertion that the examiner

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respectfully disagrees. If specific rationale is provided then this may be addressed.

However, simply asserting an unsubstantiated opinion does not provide enough weight to overcome the rejection. The applicant pointed out that it was mentioned that benefits of added flexibility and the production of a more desirable output may have occurred from the implementation of Torpey. However, the applicant that asserts that just because these motivations were present does not mean that one of ordinary skill would have thought to utilize Torpey with the ideas of Ishizuka. Why not?

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM C. STOREY whose telephone number is (571)270-3576. The examiner can normally be reached on Monday - Friday Eastern Standard Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Y. Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William C Storey/
Examiner, Art Unit 2625

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